

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Previously presented): A character recognition processing device, comprising:

- a photographing unit which photographs a plurality of character images using a continuous photographing operation in which a continuous still image is captured and automatically divided into the plurality of character images, wherein each character image comprises a plurality of characters;
- an image fetching unit, which fetches image data of the plurality of character images as objects to be recognized, the plurality of character images being photographed for recognizing individual characters of the plurality of characters in each character image;
- a cursor information output unit, which outputs cursor position information showing a position of a character frame, wherein the character frame includes vertical marks and horizontal lines to be used for separating each of the individual characters of the plurality of characters in each character image;
- a display that simultaneously displays a cursor, which includes the character frame, with the continuous still image at the time of capturing the continuous still image;
- a layout analyzing unit, which collates the cursor position information with the fetched image data of the plurality of character images to analyze an arrangement of said individual characters;

a character cutting unit, which extracts said individual characters on the basis of the analyzed result of the layout analyzing unit; and

a character recognizing unit, which recognizes the extracted individual characters and converts the extracted individual characters to character information.

Claim 2 (Previously presented): The character recognition processing device according to claim 1, wherein the image fetching unit fetches the image data of the character images respectively by a prescribed area from all of the character images; and

wherein the layout analyzing unit collates the cursor position information with the fetched image data of each of the plurality of character images separately.

Claim 3 (Previously presented): The character recognition processing device according to claim 1, wherein the image fetching unit fetches the image data of the character images respectively by a prescribed area from all of the character images; and

wherein the layout analyzing unit collates the cursor position information with the image data in which the plurality of fetched character images are connected together.

Claim 4 (Original): A portable terminal device having the character recognition processing device according to any one of claims 1 to 3.

Claim 5 (Previously presented): A portable terminal device, comprising:

a photographing unit, which photographs a plurality of character images using a continuous photographing operation in which a continuous still image is captured and

automatically divided into the plurality of character images, wherein each one of the plurality of character images comprises a plurality of characters;

an image fetching unit, which fetches image data of the photographed plurality of character images;

a cursor information output unit, which outputs cursor position information showing a position of a character frame, wherein the character frame includes vertical marks and horizontal lines to be used for separating each of the individual characters of the plurality of characters in each character image;

a display that simultaneously displays a cursor, which includes the character frame, with the continuous still image at the time of capturing the continuous still image;

a layout analyzing unit, which collates the cursor position information with the fetched image data of the plurality of character images to analyze the arrangement of said individual characters;

a character extracting unit, which extracts said individual characters on the basis of the analyzed result of the layout analyzing unit; and

a character recognizing unit, which recognizes the extracted individual characters and converts the extracted individual characters to character information.

Claim 6 (Canceled)

Claim 7 (Previously presented): The portable terminal device according to claim 5, further comprising a recognized character display unit which displays, on said display, the character information as a recognized result by the character recognizing unit.

Claim 8 (Original): The portable terminal device according to claim 7, wherein the recognized character display unit individually selectively displays the character information as the recognized result by a prescribed character unit.

Claim 9 (Original): The portable terminal device according to claim 5, further comprising a recognized character storing unit which stores the character information as the recognized result obtained by the character recognizing unit.

Claim 10 (Original): The portable terminal device according to claim 9, wherein the recognized character storing unit stores the character information in a recognized character storing area.

Claim 11 (Original): The portable terminal device according to claim 9, wherein the recognized character storing unit registers the character information in a data base corresponding to a type of each character information when the type of the character information is any one of a telephone number, a mail address and a URL (Uniform Resource Location).

Claim 12 (Previously presented): The portable terminal device according to claim 5, further comprising a recognized character utilizing unit which utilizes the character information as the recognized result obtained by the character recognizing unit in accordance with a type of the character information.

Claim 13 (Previously presented): The portable terminal device according to claim 12, wherein when the type of the character information is a telephone number, the recognized character utilizing unit displays a transmitting screen to the telephone number.

Claim 14 (Previously presented): The portable telephone terminal device according to claim 12, wherein when the type of the character information is a mail address, the recognized character utilizing unit displays a preparing screen for an electronic mail to the mail address.

Claim 15 (Previously presented): The portable terminal device according to claim 12, wherein when the type of the character information is a URL (Uniform Resource Locator), the recognized character utilizing unit displays a network connecting screen to the URL.

Claim 16 (Previously presented): The portable terminal device according to claim 5, wherein before the image fetching unit fetches the image data of the plurality of character images, the image data of the plurality of character images are connected together; and

wherein the character recognizing unit recognizes the extracted individual characters of the image data of the connected character images to convert the image data of the connected character images to the character information.

Claim 17 (Previously presented): The portable terminal device according to claim 5, wherein the character recognizing unit separately recognizes each of the extracted individual characters.

Claim 18 (Previously presented): The portable terminal device according to claim 5, wherein the character recognizing unit has a plurality of recognizing modes that each correspond with a type of character information; and

wherein the character recognizing unit carries out a character recognizing process suitable for the corresponding type of character information in accordance with a preset recognizing mode.

Claim 19 (Currently amended): A character recognition processing method performed by a portable terminal device, comprising the steps of:

photographing, by the portable terminal device, a plurality of character images, each of which comprises a plurality of characters, while simultaneously displaying each respective character image together with a cursor that includes a character frame for recognizing a character, wherein the plurality of character images are photographed using a continuous photographing operation in which a continuous still image is captured and automatically divided into the plurality of character images;

fetching image data of the photographed plurality of character images;

outputting cursor position information showing the position of the character frame, wherein the character frame includes vertical marks and horizontal lines to be used for separating each of the individual characters of the plurality of characters in each character image;

collating the cursor position information with the fetched image data of the plurality of character images to analyze the arrangement of said individual characters;

extracting said individual characters on the basis of the analyzed result of the arrangement of said individual characters; and

recognizing the extracted individual characters images as the character and converting the extracted individual characters to character information.

Claim 20 (Previously presented): A character recognition processing program in which the respective steps defined in claim 19 are executed by a computer, wherein said program is stored within a memory device that is accessible by the computer.